

## DEHUMIDIFICATION

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### Abstract of JP61216714

**PURPOSE:** To dehumidify air by condensing steam in air at ambient temp. while dispensing with regeneration treatment, by contacting air to be dehumidified with the connection body formed by integrally adhering an anode and a cathode to both surfaces of a cation exchange membrane. **CONSTITUTION:** A mixture consisting of a carbon powder supporting a platinum catalyst and an adhesive is adhered to the single surface of a certain exchange membrane 1 comprising a perfluorocarbon sulfone resin by a hot plate method to form a cathode 2 and platinum is adhered to the other surface of said membrane 1 by an electroless plating method to form an anode. Air to be dehumidified is applied to a cathode chamber 10 and an anode chamber 11 and steam in air is absorbed by the cation exchange membrane 1 and DC voltage is applied to both electrodes. The electrolytic reducing reaction of oxygen is generated at the cathode 2 and oxygen generating reaction is generated at the anode 3 and water is leaked from the back surface of the cathode. This water is accumulated in a water pump 12 and the residual gas after deoxidation is exhausted from an exhaust port 13. Oxygen generated at the anode 3 is exhausted from an exhaust port 14. By this method, steam in the air is condensed to be collected in the water pump 12.

